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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/733,386

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Akira Shimofuku

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EXAMINER

GOMA, TAWFIK A

ART UNIT

PAPER NUMBER

2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/733,386

Applicant(s)

SHIMOFUKU, AKIRA

Examiner

Tawfik Goma

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Kobayashi (US 6754158).

Regarding claim 16, Kobayashi discloses a method of fabricating an optical recording medium comprising the steps of: preparing a stamper having a prescribed pit pattern (col. 7 lines 50-54); and forming a disk using the stamper, the disk having the pit pattern in a prescribed area in which a product  $W*L$  of a width ( $W$ ) and a length ( $L$ ) of an  $nT$  pit varies (figs. 21a-21f and Abstract), where  $n$  is a natural number and  $T$  denotes clock time (col. 5 lines 3-9).

Regarding claim 17, Kobayashi further discloses wherein the stamper preparing step includes a step of forming the pit pattern with a variable length of the  $nT$  pit in the stamper (Abstract and figs. 23a-23c).

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Regarding claim 18, Kobayashi further discloses wherein the pit pattern forming step includes a laser exposure step of delineating the pit pattern, while changing an exposure duty of the nT pit (figs. 5a, 5b and col. 12 lines 12-20).

Regarding claim 19, Kobayashi further discloses wherein the pit pattern is formed in the stamper such that the product  $W \cdot L$  of the nT pit varies discontinuously (figs. 23a, 23b and figs. 5a, 5b).

Regarding claim 20, Kobayashi further discloses wherein the stamper preparing step includes a step of forming the pit pattern with a variable width of the nT pit in the stamper (fig. 16)

Regarding claim 21, Kobayashi further discloses wherein the pattern forming step includes a laser exposure step of delineating the pit pattern (figs. 5a, 5b), while changing an exposure power (col. 13 lines 16-28).

Regarding claim 22, Kobayashi further discloses wherein the pit pattern of the stamper is formed such that the product  $W \cdot L$  of the nT pit varies continuously (figs. 16 and 23c)

Regarding claim 23, Kobayashi discloses a stamper used to fabricate a substrate of an optical recording medium, wherein the stamper has a prescribed pit pattern in at least a portion thereof (col. 7 lines 50-54), the pit pattern being formed such that a product  $W \cdot L$  of a width and a length of an nT pit forming the pit pattern varies (fig. 16 and figs. 23a-23c), where n is a natural number and T denotes clock time (col. 5 lines 3-9).

Regarding claim 24, Kobayashi further discloses wherein the stamper is used to fabricate a disk-type optical recording medium, and the product  $W \cdot L$  of the nT pit varies in a radial direction (figs. 4a, 4b and col. 9 lines 20-27)

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Regarding claim 25, Kobayashi further discloses wherein the product  $W*L$  of the nT pit varies continuously (figs. 16 and 23c)

Regarding claim 26, Kobayashi further discloses wherein the stamper is used to fabricate a disk-type optical recording medium, and the product  $W*L$  of the nT pit varies in a circumferential direction (figs. 4a, 4b, and col. 9 lines 20-27).

Regarding claim 27, Kobayashi further discloses wherein the product  $W*L$  of the nT pit varies discontinuously (fig. 23b, fig. 16 and col. 17 lines 29-32).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (US 6754158) in view of Ha (US 6423478).

Regarding claim 1, Kobayashi discloses an optical recording medium having a visible pattern on a disk (fig. 5a), the visible pattern being produced making use of change in reflectance of the disk caused by change in product  $W*L$  of a width (W) and a length (L) of an nT pit formed in the area (Abstract and figs. 23a-23c), where n denotes a natural number and T denotes clock time (col. 5 lines 3-13). Kobayashi fails to disclose wherein the pattern is recorded in a read-only area of a disc. In the same field of endeavor, Ha discloses recording a pattern such as a watermark in a read-only area of a disc (30, fig. 1). It would have been obvious to one of ordinary skill in the art to modify the recording medium disclosed by

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Kobayashi by recording the pattern in a read-only area of a disc as taught by Ha. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide the pattern in a read-only area in order to prohibit altering of watermark data used for copy protection.

Regarding claim 2, Kobayashi further discloses wherein the visible pattern is a concentric pattern (figs. 5a, 5b and col. 9 lines 28-44).

Regarding claim 3, Kobayashi further discloses wherein the visible pattern is a radial pattern (figs 5a, 5b and col. 9 lines 28-44).

Regarding claim 4, Kobayashi further discloses wherein the visible pattern is a character or symbol pattern (figs. 5a, 5b).

Regarding claim 5, Ha further discloses wherein the disk has a recordable area, in addition to the read-only area (50, fig. 1). It would have been obvious to one of ordinary skill in the art to modify the recording medium disclosed by Kobayashi by providing a recording area as well as a read only area. The rationale is as follows: One of ordinary skill at the time of the applicant's invention would have been motivated to provide a recording area as well as a read-only area to allow a user to record data on the disc.

Regarding claim 6, Kobayahi further discloses wherein the area is divided into a plurality of regions (figs. 5a, 5b), and at least one of the width and the length of the nT pit are variable such that the product  $W*L$  varies among the regions (Abstract and figs. 23a-23c). Ha discloses wherein the area is a read-only area as disclosed above.

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Regarding claim 7, Kobayashi further discloses wherein the area is divided into a plurality of regions (figs. 5a, 5b), and the length of the nT pit varies among the regions (figs. 21f, 23a, 23b and abstract), each of the regions having a different value of a signal reproduction characteristic (figs. 21a-21f), in addition to a different value of the product  $W*L$  (abstract and figs. 23a-23c). Ha discloses wherein the area is a read only area as disclosed above.

Regarding claim 8, Kobayashi discloses an optical recording medium comprising: a substrate having an area in which pits are formed such that a product  $W*L$  of a width (W) and a length (L) of an nT pit varies according to a prescribed manner (Abstract, figs. 5a, 5b and col. 9 lines 28-44), where n denotes a natural number and T denotes clock time (col. 5 lines 3-13). Ha discloses wherein the area is a read-only area. The rationale for combining the references follows as in claim 1 above.

Regarding claim 9, Kobayashi discloses wherein the substrate is of a disk type (figs. 5a, 5b), and the product  $W*L$  of the nT pit varies in the radius direction of the disk (figs. 4a, 4b and col. 9 lines 20-27).

Regarding claim 10, Kobayashi further disclose wherein the product  $W*L$  of the nT pit varies continuously (figs. 23a, and 23c)

Regarding claim 11, Kobayashi further discloses wherein the substrate is of a disk type (fig. 5a), and the product  $W*L$  of the nT pit varies in the circumferential direction of the disk (figs. 4a, 4b and col. 9 lines 20-27).

Regarding claim 12, Kobayashi further discloses wherein the product  $W*L$  of the nT pit varies discontinuously (figs. 23a, 23b).

Regarding claim 13, Kobayashi further discloses wherein a reflectance of the read-only area varies along with change in the product  $W \cdot L$ , thereby producing a visible pattern in the read-only area (fig. 5a and col. 9 lines 45-52).

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (US 6754158) in view of Ha (US 6423478) as applied to claims 1-13 above, and further in view of Usami (US 2002/0034155).

Regarding claims 14 and 15, Kobayashi further discloses a recording layer formed over the substrate (col. 3 lines 10-12), but fails to disclose the recording layer being made of a pigment liquid material and a reflection layer formed over the pigment liquid material. In the same field of endeavor, Usami discloses a disc with a pigment liquid material used for a recording layer (par. 66 and fig. 1) and a reflection layer formed over the liquid pigment layer (par. 67). It would have been obvious to one of ordinary skill in the art to provide the liquid pigment layer as the recording layer. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide the liquid pigment layer in order to produce a CD-R type disc.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tawfik Goma whose telephone number is (571) 272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
T. Goma  
2/14/2007

  
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